Antitrust Laws and Real Estate Licensees

In addition to the state real estate license law, federal antitrust laws impose certain restrictions on a real estate agent’s behavior towards clients, customers, and other agents. Some states also have state antitrust laws.

The main federal antitrust law is the Sherman Act. The Sherman Act prohibits any agreement that has the effect of unreasonably restraining trade, including conspiracies. Under the Sherman Act, a conspiracy occurs when two or more business entities participate in a common scheme, the effect of which is the unreasonable restraint of trade.

The foundation of antitrust laws is the idea that competition is good for both the economy and society as a whole. While antitrust laws are usually associated with big steel mills, oil companies, and telephone companies, in 1950 antitrust laws were held to apply to the real estate industry. In a landmark case, the United States Supreme Court held that mandatory fee schedules, established and enforced by a real estate board, violated the Sherman Act (United States v. National Association of Real Estate Boards).

If a real estate licensee violates antitrust laws, she may be subject to both civil and criminal actions. If an individual is found guilty of violating the Sherman Act, he can be fined up to one million dollars and/or sentenced to ten years’ imprisonment. If a corporation is found guilty of violating the Sherman Act, it can be fined up to one hundred million dollars.

The activities that are prohibited by antitrust laws can be grouped into four main categories:

• price fixing (fixing commission rates),
• group boycotts,
• tie-in arrangements, and
• market allocation.
Price Fixing

Price fixing is defined as the cooperative setting of prices or price ranges by competing firms. To avoid the appearance of price fixing, two real estate agents from different brokerages should never discuss their commission rates. (It is a discussion between competing agents that is dangerous; brokers and affiliated licensees that work for the same company can discuss commission rates.) One exception to this general prohibition is that two competing brokers may discuss a commission split—the division of the commission between the listing broker and the selling broker—in a cooperative sale.

Even a casual announcement that a broker is planning on raising his commission rates could lead to antitrust problems.

Example: Broker Wood goes to a dinner given by his local multiple listing service. He is called on to discuss current market conditions and, in the middle of his speech, he announces that he is going to raise his commission rate, no matter what anyone else does. This statement could be viewed as an invitation to conspire to fix prices. If any other MLS members raise their rates in response to his announcement, they could be held to have accepted Wood’s invitation to conspire.

Brokers need to understand that they do not have to actually consult with each other to be charged with conspiring to fix commission rates. The kind of scenario described in the previous example is enough to lead to an antitrust lawsuit.

Publications that appear to fix prices are prohibited as well. An MLS or other association that published “recommended” or “going” rates for commissions could be sued for antitrust violations.
Group Boycotts

A group boycott is an agreement between two or more people engaged in a business to exclude another from fair participation in that field. The purpose of a group boycott is to hurt or destroy a competitor, and it is a violation of antitrust laws.

Example: Becker and Jordan are both brokers. Over lunch together, they discuss the business practices of a third broker, Harley. Becker says she thinks Harley is dishonest. Jordan agrees. He says that he's decided not to do business with Harley. He avoids Harley whenever possible, and just doesn’t call back if Harley calls to ask about a listed property. He suggests that Becker should do this too. This conversation could be considered an agreement to boycott Harley.

If a broker feels another broker is dishonest or unethical, he may choose not to do business with that other broker. But encouraging other brokers to do the same thing could be considered a group boycott.

Tie-in Arrangements

A tie-in arrangement is defined as “an agreement to sell one product, only on the condition that the buyer also purchases a different (or tied) product...”

Example: Brown is a subdivision developer. Tyson, a builder, wants to buy a lot from Brown and build a house on it. Brown tells Tyson that he will sell him a lot only if Tyson enters into a list-back agreement. In other words, Tyson must sign a contract promising that after he builds a house on the lot, he will list the improved property with Brown. Requiring Tyson to do this as a condition of selling the lot is an illegal tie-in arrangement; Brown is violating antitrust laws.

In the example, note that it's the tie-in arrangement that is the antitrust violation, not the list-back agreement itself. If Tyson wanted to enter into a list-back agreement with Brown, the agreement wouldn’t be illegal.
Market Allocation

Market allocation occurs when competing brokerage firms agree not to sell certain products or services in specified areas or to certain customers in specified areas. Market allocation between competing real estate firms is illegal, because it limits competition.

As with group boycotts, it’s the collective action that makes market allocation illegal. An individual brokerage firm is free to determine the market areas in which it wants to specialize (if any); similarly, the firm can allocate territory to particular licensees affiliated with the firm. Allocation of territory between competing firms, however, is a violation of antitrust law.

Example: ABC Realty assigns Agent Ava to handle all new customers in the luxury home market, and assigns Agent Paxton to all new customers in the vacant land market. This practice does not violate antitrust law.

However, if ABC Realty and XYZ Realty agreed to allocate customers so that ABC Realty will handle all luxury homes and XYZ Realty will handle all vacant land, this would violate antitrust law.

Avoiding Antitrust Violations

To prevent possible antitrust violations, brokers should:

• always establish their fees and other listing policies independently, without consulting competing firms;
• never use listing forms that contain pre-printed commission rates;
• never imply to a client that the commission rate is fixed or non-negotiable, or refer to a competitor’s commission policies when discussing commission rates;
• never discuss their business plans with competitors;
• never tell clients or competitors that they won’t do business with a competing firm, or tell them not to work with that firm because of doubts about its competence or integrity; and
train their licensees to be aware of the types of actions that could be considered antitrust law violations. (Rockwell, 254-256)

Civil Rights and Fair Housing

Federal and state laws prohibit unfair discrimination in almost all real estate transactions. With limited exceptions, it is illegal for either property owners or real estate professionals to discriminate. In this chapter, we will cover several federal antidiscrimination laws, including the Civil Rights Act of 1866, the Federal Fair Housing Act, and the Americans with Disabilities Act. We will also discuss various state laws that prohibit discrimination in housing as well as in other real estate transactions.

Introduction

Over the years, various civil rights laws have been enacted to achieve one major goal: the freedom of choice. In the context of real estate, freedom of choice means that all types of people with similar financial resources should have equal access to the same types of housing. Anyone with the requisite income, net worth, and credit history should be able to choose a home or apartment in any affordable neighborhood, regardless of race, national origin, gender, or other similar characteristics.

Today, civil rights laws are an integral part of the real estate profession. The importance of the right to equal housing is well established, and real estate professionals must be familiar with both federal and state laws that prohibit discrimination.

The Civil Rights Act of 1866

This law states that “all citizens of the United States shall have the same right, in every state and territory as is enjoyed by white citizens thereof to inherit, purchase, lease, sell, hold and convey real and personal property.” The act prohibits any discrimination based on race or color. It applies to the actions of both public organizations and private individuals.
Enacted immediately after the Civil War, the act was largely ignored for almost a century. In the 1960s, during the civil rights movement, the act was challenged as an unconstitutional interference with private property rights. But the U.S. Supreme Court upheld the act in the landmark case of Jones v. Mayer, decided in 1968. The court ruled that the 1866 act “prohibits all racial discrimination, private or public, in the sale and rental of property,” and that the act is constitutional based on the 13th Amendment to the U.S. Constitution, which prohibits slavery.

Someone who has been discriminated against in violation of the Civil Rights Act of 1866 can sue in federal court. The court can issue an injunction ordering the defendant to stop discriminating or to take affirmative steps to correct the violation. This might involve an order requiring the defendant to sell or lease the property to the plaintiff. The court can also order the defendant to pay the plaintiff actual damages (compensatory damages) to compensate for financial losses, humiliation, and suffering caused by the discrimination. In addition, the defendant might be ordered to pay punitive damages (an additional sum to punish the defendant for wrongdoing).

**The Civil Rights Act of 1964**

The Civil Rights Act of 1964 was one of the first attempts made by the federal government to implement fair housing ideals. The act prohibits discrimination based on race, color, religion, or national origin in many programs and activities for which the federal government offered financial assistance. Unfortunately, the effect of the act was extremely limited, because most FHA and VA loans were not covered. In fact, it is estimated that less than 1% of all houses purchased were covered by the act. It was not until the Civil Rights Act of 1968 that major progress was made towards fair housing.
The Federal Fair Housing Act

Contained in Title VIII of the Civil Rights Act of 1968, the Fair Housing Act is intended to provide fair housing opportunities throughout the United States. This law makes it illegal to discriminate on the basis of race, color, religion, sex, national origin, disability, or familial status in the sale or lease of residential property or in the sale or lease of vacant land for the construction of residential buildings. Victims of discrimination falling into one of these categories are known as members of a protected class. The law also prohibits discrimination in advertising, lending, real estate brokerage, and other services in connection with residential real estate transactions. However, unlike the 1866 Civil Rights Act, the Fair Housing Act does not apply to nonresidential transactions, such as those involving commercial or industrial properties.

Exemptions

While the Fair Housing Act applies to the majority of residential real estate transactions, four types of transactions are exempt from it.

1. The law does not apply to the sale or rental of a single-family home by its owner, provided that:
   • the owner does not own more than three such homes;
   • no real estate broker or agent is employed in the transaction; and
   • no discriminatory advertising is used.

   If the owner isn’t the most recent occupant of the home, he may use this exemption only once every 24 months.

2. The law does not apply to the rental of a unit or a room in a dwelling with up to four units, provided that:
   • the owner occupies one of the units as her residence;
   • no real estate broker or agent is employed; and
   • no discriminatory advertising is used.

   (This is sometimes called the Mrs. Murphy exemption.)
Fig. 16.1 Fair housing poster

U.S. Department of Housing and Urban Development

EQUAL HOUSING OPPORTUNITY

We Do Business in Accordance With the Federal Fair Housing Law
(The Fair Housing Amendments Act of 1988)

It is illegal to Discriminate Against Any Person Because of Race, Color, Religion, Sex, Handicap, Familial Status, or National Origin

- In the sale or rental of housing or residential lots
- In advertising the sale or rental of housing
- In the financing of housing
- In the provision of real estate brokerage services
- In the appraisal of housing
- Blockbusting is also illegal

Anyone who feels he or she has been discriminated against may file a complaint of housing discrimination:
1-800-669-9777 (Toll Free)
1-800-927-9275 (TTY)

U.S. Department of Housing and Urban Development
Assistant Secretary for Fair Housing and Equal Opportunity
Washington, D.C. 20410

Previous editions are obsolete

Form HUD-823.1 (2/2003)
3. In dealing with their own property in noncommercial transactions, religious organizations or societies or affiliated nonprofit organizations may limit occupancy to or give preference to their own members, provided that membership isn’t restricted on the basis of race, color, or national origin.

4. Private clubs with lodgings that aren’t open to the public and that aren’t operated for a commercial purpose may limit occupancy to or give preference to their own members.

These limited exemptions apply very rarely. Remember, the 1866 Civil Rights Act prohibits discrimination based on race or color in any property transaction regardless of any exemptions available under the Fair Housing Act. In addition, there is no exemption for any transaction involving a real estate licensee.

Prohibited Acts

The Fair Housing Act prohibits any of the following acts if they are done on the basis of race, color, religion, sex, national origin, handicap, or familial status:

- refusing to rent or sell residential property after receiving a bona fide offer;
- refusing to negotiate for the sale or rental of residential property, or otherwise making it unavailable;
- changing the terms of sale or lease for different potential buyers or tenants;
- using advertising that indicates a preference or intent to discriminate;
- representing that property is not available for inspection, sale, or rent when it is in fact available;
- using discriminatory criteria when making a housing loan;
- limiting participation in a multiple listing service or similar service;
- coercing, intimidating, threatening, or interfering with anyone on account of his enjoyment, attempt to enjoy, or encouragement or
assistance to others in enjoying the rights granted by the Fair Housing Act.

Also prohibited are the discriminatory practices known as blockbusting, steering, and redlining.

- **Blockbusting** occurs when someone tries to induce homeowners to list or sell their properties by predicting that members of another race (or disabled persons, persons of a particular ethnic background, etc.) will be moving into the neighborhood, and that this will have undesirable consequences such as lower property values. The blockbuster then profits by purchasing the homes at reduced prices or (in the case of a real estate agent) by collecting commissions on the induced sales. Blockbusting is also known as panic selling or panic peddling.

  **Example:** An African-American family recently moved into an all-white neighborhood. XYZ Realty immediately began calling all the homeowners in the neighborhood. XYZ’s salespeople warned the homeowners of the following: several African-American families were planning on moving into the neighborhood, city police predicted a significant increase in crime in the neighborhood, property values would drop dramatically, and within months homeowners would find it difficult to sell their properties to anyone at any price. Because of these “facts” made up by XYZ agents, several homeowners immediately listed their homes with XYZ Realty. XYZ Realty is guilty of blockbusting.

- **Steering** refers to channeling prospective buyers or tenants toward or away from specific neighborhoods based on their race (or religion, national origin, etc.) in order to maintain or change the character of those neighborhoods.

  **Example:** The salespeople at PQR Realty are “encouraged” to show Hispanic buyers only properties in the city’s predominantly Hispanic neighborhood. NonHispanic buyers aren’t shown
properties there, except by specific request. This is done on the principle that Hispanic buyers would be more “comfortable” living in the Hispanic neighborhood and non-Hispanic buyers would be “uncomfortable” there. PQR Realty is guilty of steering.

- **Redlining** is the refusal to make a loan because of the racial or ethnic composition of the neighborhood in which the security property is located.

  **Example:** Buyer Jones applies to Community Savings for a loan to purchase a home located in the Cherrywood neighborhood. Cherrywood is a predominantly minority neighborhood. Community Savings rejects the loan, because it fears that property values in Cherrywood may suffer in the future because of possible racial tension. Community Savings is guilty of redlining.

The prohibition against redlining is enforced through the **Home Mortgage Disclosure Act of 1975**, which requires large institutional lenders to file an annual report of all mortgage loans made. The loans are categorized according to the locations of the properties, which makes it easier to discover cases of redlining.

**Handicap and Familial Status**

Originally, the Fair Housing Act did not prohibit discrimination based on handicap or familial status; these classifications were added to the law in 1988.

**Handicap.** Under the Fair Housing Act, it is illegal to discriminate against someone because she has a physical disability or mental impairment that substantially limits one or more major life activities. This includes people suffering from chronic alcoholism, mental illness, or AIDS. But the act does not protect those who are a direct threat to the health or safety of others, or who are currently using controlled substances.
A residential landlord must allow a disabled tenant to make reasonable modifications to the property at the tenant’s expense, so long as the modifications are necessary for the tenant’s full use and enjoyment of the premises. (The tenant can be required to restore the premises to their original condition at the end of the tenancy, however.) Landlords must also make reasonable exceptions to their rules to accommodate disabled tenants. For example, even if they don’t allow pets, they can’t refuse to rent to someone with a guide dog.

Special wheelchair accessibility rules apply to newer residential construction with four or more units.

**Familial Status.** Discrimination on the basis of familial status refers to discrimination against a person because he has a child (under 18 years old) living with him. Parents, legal guardians, pregnant women, and those in the process of obtaining custody of a child are protected against discrimination on the basis of their familial status.

While the Fair Housing Act does not override local laws limiting the number of occupants permitted in a dwelling, it is unlawful for anyone to discriminate in selling, renting, or lending money to buy residential property because the applicant is pregnant or lives with a child. “Adults only” apartment or condominium complexes are forbidden, as are complexes divided into “adult” and “family” areas.

However, the law includes an exemption for properties that qualify as “housing for older persons.” Children can be excluded from properties that fit into one of the following categories:

1. properties developed under a government program to assist the elderly;

2. properties intended for and solely occupied by persons 62 years old or older; or
3. properties that adhere to a policy that demonstrates intent to house persons who are 55 or older, if at least 80% of the units are occupied by at least one person who is 55 or older.

**HUD and Enforcement**

The Fair Housing Act is enforced by the Department of Housing and Urban Development (HUD), through its Office of Fair Housing and Equal Opportunity. HUD is also authorized to issue regulations to promote the purpose of the Fair Housing Act. One such regulation requires brokers and other persons involved in real estate transactions to display a fair housing poster (shown in Figure 16.1) at their place of business.

As part of its enforcement process, HUD sometimes uses *testers*, individuals who play the role of a person wanting to buy or rent housing. A tester evaluates compliance with fair housing laws and is allowed to file a complaint if discrimination is found. Testers do not announce themselves; they appear to be normal potential clients.

When a person feels that his rights under the Fair Housing Act have been violated, he may file a complaint with HUD (within one year of the alleged discrimination) or may file a lawsuit in federal or state court. If a complaint is filed with HUD, the agency will investigate the complaint and evaluate whether the discrimination charges appear to be justified. During the investigation period, HUD can attempt to resolve the dispute by getting an agreement from the party against whom the complaint was filed, in which that party agrees to remedy the violation and take action to avoid any future discrimination.

If the dispute is not resolved and the claims are found to have merit, an administrative hearing will be held, unless either party chooses to have the case decided in federal court instead. In an administrative hearing, HUD attorneys litigate the case on behalf of the complainant. If a case involves a pattern or practice of discrimination, the U.S. Attorney General can file suit in federal court.
When someone is held to have violated the Fair Housing Act, the administrative law judge or the court may issue an injunction ordering the violator to stop the discriminatory conduct or to take affirmative steps to correct a violation. The violator may also be ordered to pay actual damages and attorney’s fees to the complainant. Actual damages may include compensation for humiliation suffered as a result of discrimination, as well as for financial losses. A federal court can order the violator to pay punitive damages to the complainant. If the case is brought by the Attorney General, instead of punitive damages the court can order a civil penalty ranging from a maximum of $55,000 for a first offense up to a maximum of $110,000 for a third or subsequent offense. An administrative law judge can also impose a civil penalty; the maximum penalty in this case ranges from $16,000 for a first offense up to $70,000 for a third or subsequent offense.

Many states have their own fair housing laws, which are often very similar to the Fair Housing Act. If the state laws and regulations have comparable prohibitions, HUD may refer the complaints it receives to the equivalent state agency. The state must be able to show that its agency responds appropriately to complaints and takes sufficient action to prevent discrimination.

**Federal Fair Lending Laws**

Real estate agents and sellers are not the only ones who must avoid discriminatory activities. There are also federal laws designed to eliminate discrimination in lending.

They include:

- the Federal Fair Housing Act (discussed above),
- the Equal Credit Opportunity Act, and
- the Home Mortgage Disclosure Act.

The Fair Housing Act prohibits discrimination in home loans and other aspects of residential financing. It does not apply to any other credit transactions.
The **Equal Credit Opportunity Act (ECOA)** applies to credit transactions, including mortgage lending. The act prohibits lenders, loan originators, mortgage brokers, and others involved in financing from discriminating based on race, color, religion, national origin, sex, marital status, age (as long as the applicant is of legal age), or because the applicant’s income is derived partly or wholly from public assistance.

Under the Equal Credit Opportunity Act, a lender may ask applicants about race, national origin, sex, and marital status, but only to gather information that allows the government to monitor compliance with the act. Giving the information is voluntary; the lender cannot require it. However, if the applicant and lender are located in a community property state (or if there is any other reason that an applicant’s spouse would share the obligation), the lender may ask questions about spouses and marital status.

If the application is denied, the lender must give the applicant a written statement explaining the reasons for the denial of credit. A lender who discriminates in violation of the act can be liable for damages, court costs, and attorney’s fees.

The **Home Mortgage Disclosure Act** helps the government learn whether lenders are fulfilling their obligation to serve the housing needs of the communities where they are located. The act facilitates the enforcement of federal laws against redlining.
Under the Home Mortgage Disclosure Act, large institutional lenders in metropolitan areas must make annual reports on residential mortgage loans (both purchase and improvement loans) that were originated or purchased during the fiscal year. The information is categorized as to number and dollar amount, type of loan (FHA, VA, other), and geographic location by census tract or county (for small counties with no established census tracts). The reports disclose areas where few or no home loans have been made and alert investigators to potential redlining.

**Equal Access to Facilities**

The **Americans with Disabilities Act** (ADA), which became effective in January of 1992, is a federal law that was passed to ensure that disabled persons have equal access to public facilities. The ADA requires any business or other nonresidential facility open to the public to be accessible to the disabled. (Private clubs and religious organizations are exempt from the ADA.)

Under the ADA, no one can be discriminated against on the basis of disability in any place of public accommodation or commercial facilities. A place of **public accommodation** is defined to include any nonresidential place that is owned, operated, or leased by a private entity and open to the public, as long as the operation of the facility affects commerce. A **disability** is defined as any physical or mental impairment that substantially limits one or more of the individual’s major life activities.

Real estate offices are considered to be places of public accommodation, along with hotels, restaurants, retail stores, shopping centers, banks, and the offices of other service professionals, such as insurance agents and accountants.

To ensure the accessibility of public accommodations, the ADA requires all of the following to be accomplished, as long as they are “readily achievable”: 


• Both architectural and communication barriers must be removed so that goods and services are accessible to the disabled.
• Auxiliary aids and services must be provided so that no disabled person is excluded, denied services, segregated, or otherwise treated differently from other individuals.
• All new construction of places of public accommodation or other commercial facilities must be accessible to the disabled, unless structurally impractical.

For example, the owner of a commercial building with no elevator may have to install automatic entry doors and a buzzer at street level so that customers of a second-floor business can ask for assistance. A commercial building owner might also be required to alter the height of a door handle to make it accessible to someone in a wheelchair, add grab bars to restroom stalls, and take a variety of other steps to make the building’s facilities accessible.

State Antidiscrimination Legislation

Not only must real estate agents, sellers, and landlords comply with the federal laws we’ve just discussed, they must also comply with state laws that prohibit discrimination. Many states have laws designed to promote fair housing within the state. Counties and cities may also have their own antidiscrimination ordinances.

State and local regulations often cover even more forms of discrimination than federal fair housing laws. They may have more limited exemptions or include additional protected classes, such as age or sexual orientation. Also, state antidiscrimination laws often apply not just to housing, but also to employment, credit transactions, and other types of business activities.

Real estate agents have a special obligation not to discriminate or assist in discrimination by others. The real estate license law in many states provides that violating any fair housing or civil rights laws or regulations is grounds for disciplinary action.
Complying with Fair Housing Laws

As you can see, antidiscrimination laws cover a lot of territory. Real estate agents must be familiar with these laws and know what activities are prohibited. Keep in mind that violating these laws does not require an intent to discriminate; even good intentions can lead to a violation of antidiscrimination laws.

Example: Matthews is giving a listing presentation at the Flores home. The Flores family is from Central America and they speak only limited English. Matthews does not speak Spanish and feels uncomfortable because of the communication barrier. When Matthews finishes the presentation, Mr. Flores tells him they want to list their property right away. Somewhat sheepishly, Matthews suggests that they may want to list their property with an agent who speaks Spanish. He explains tactfully that he has a very difficult time understanding them and believes that they would be happier with a Spanish-speaking agent.

The Flores family insists that they want to list with Matthews but he declines, telling them another agent would be able to give them better service. This well intentioned refusal to list their property might be regarded as discrimination on the basis of national origin, and could be considered a violation of federal or state antidiscrimination laws.

To avoid unintentional discriminatory acts, real estate agents should follow some basic guidelines when working with clients and advertising properties they have listed.

Working with Clients

Real estate agents should never say or imply that the presence of persons of a particular protected class (race, national origin, etc.) in a neighborhood could or will result in:

- lower property values;
- a change in the composition of the neighborhood;
• a more dangerous neighborhood; or
• a decline in the quality of the schools in the neighborhood.

**Example:** Chadwick is making a listing presentation to Thompson, a homeowner who is considering selling her property but isn’t sure this is the right time. During the presentation, Chadwick says to Thompson, “I hear your neighbor, Bowen, has an offer on his house from a minority couple. You know, it might be a good idea to get your house listed and an offer nailed down before any minority families move into the neighborhood. That way, you can get the best price for your house. If you wait until Bowen’s house is sold—well, you just might not get as much for your house.” This is an example of blockbusting. Chadwick has violated the antidiscrimination laws.

Most agents would not act in an overtly discriminatory way; for example, they wouldn’t raise the listing price because of the race of the prospective buyer. Yet some of these same agents might tell racial or ethnic jokes or make derogatory remarks about a particular group of people. Although these jokes or remarks don’t necessarily indicate a willingness to actually discriminate in a transaction, a listener might assume that they do.

Even listening or going along with inappropriate remarks can give the impression that the agent agrees with these discriminatory attitudes. Agents need to watch out for signs of such attitudes, in order to avoid helping others violate antidiscrimination laws.

**Example:** Hawthorne is making a listing presentation to the Boyds, a white couple who live in a predominantly white neighborhood. During the discussion, Mr. Boyd says, “You know, we certainly want the best price for our house. But we want you to be pretty careful who you show it to. We spent a lot of time fixing up this house. Hey, we raised our kids here. We really don’t want to change the neighborhood. Our neighbors are good, traditional, hard-working folks. We don’t want a buyer who would lower everybody else’s property values. You know what we mean.”
Even though the Boyds don’t come out and say so, they could easily be implying that they would not accept an offer from a buyer with a different racial or ethnic background. Their comments are red flags indicating the possibility of discrimination.

Listing agents should make sure the seller is willing to follow the law, and decline to take the listing if the seller is not.

Real estate agents should also provide equal service to buyers and sellers without regard to their race, creed, color, religion, national origin, ancestry, sex, marital status, familial status, age, or disability. For example, an agent should never refuse to show a property to a potential buyer based on discriminatory reasons.

**Example:** Alison is working with the Kawaguchi family, who is interested in a particular listing. Alison has heard that the owner of this house is extremely prejudiced against Asians and she knows the seller will refuse any offer from the Kawaguchis. To avoid a confrontation, she tells them that the house is no longer available. Alison has just unlawfully discriminated against the Kawaguchis by telling them the house was not available when, in fact, it was available.

**Advertising Properties**

Advertising is an important element in marketing a property, but it also has potential pitfalls for discrimination. Sometimes even apparently innocent statements or actions may be interpreted as discriminatory. Consider the following practices for which a real estate agent might be accused of discrimination.

- A property for sale is advertised only in neighborhoods where the residents are all predominantly of the same race or ethnic background as the seller.
• A flyer about a property is sent to all the neighboring properties except those owned by people of a particular race or ethnic background.
• The wording of an ad suggests that the recipient can control the type of person who will buy the property.

Example: A flyer for an open house tells neighbors that they can, by referring potential buyers, “uphold the standards of the community.” However, the flyer fails to specify what community standards it refers to. Because it doesn't clearly describe these standards in nondiscriminatory language, a reader could infer that she can control the race or ethnic background of the buyer. The flyer might be found to violate antidiscrimination laws.

• The choice of models used in display advertising lacks diversity.

Example: A broker is the listing agent for a large, exclusive housing development. She advertises the homes in the development by putting display ads in the local paper. In every ad she places, the buyers and sellers are depicted only by white models, even though 38% of the city’s population is non-white. The use of only white models could be grounds for a discrimination suit.

When pictures of people are used in display advertising, they should be carefully chosen to make sure that the pictures give the impression that the housing is open to everyone.

Actions That Do Not Violate Fair Housing Laws

Certain actions may initially appear to violate antidiscrimination laws, but in fact are not considered to be violations. Here are some examples.

• A real estate agent may ask questions or make statements as necessary to best serve the needs of a disabled person. This may include calling the attention of disabled clients or customers to particular buildings built or modified to meet their needs.
• Positive measures to reach out to members of a protected class, rather than discriminating against them, may be acceptable. An affirmative marketing plan may try to attract members of a particular group to an area or property that they might not otherwise be aware of. A brokerage or real estate board may also take affirmative steps to recruit minority employees or members.

Example: The developer of a large, moderately priced subdivision located on the fringes of the metropolitan area contacts a broker to assist in the sale of properties in the subdivision. The developer encourages the broker to target marketing efforts toward recent immigrants who might be looking for affordable entry-level housing. Most of the recent immigrants in the area are non-white and live in a few older urban neighborhoods. The broker could devote extra effort to advertising in immigrant community newspapers or leafletting these neighborhoods, so long as she also advertised in other neighborhoods or in newspapers of wider circulation.

• Real estate agents may truthfully answer questions about the racial composition of neighborhoods, even if this results in unintentional racial steering. If a buyer expresses a desire not to be shown homes in a particular neighborhood, even if the buyer makes that decision because of the race or other characteristics of the residents, you are not obligated to show them homes in that neighborhood.

Example: You are representing the Duvalls, who have only a limited amount of money to spend on their first home. You suggest a variety of neighborhoods where there are listings that fit their price range and other preferences, including the Greengate neighborhood. When Mr. Duvall asks about the people who live in Greengate, you truthfully respond that most of the residents belong to a particular immigrant group. Mr. Duvall says, “I’m not sure we’d feel comfortable there; we’d rather look in other areas.” So long as you do not coerce or discourage the Duvalls from looking at
properties in this neighborhood, you are not required to show the Duvalls houses in this area against their wishes.

**Discriminatory Restrictive Covenants**

At one time in the United States it was quite common for a property’s deed or a subdivision’s CC&Rs to include a restrictive covenant prohibiting the sale or lease of the property to non-whites or non-Christians. These discriminatory restrictions were generally considered legal and enforceable until the Supreme Court decided the case of *Shelley v. Kraemer* in 1948. The court ruled that it was unconstitutional—a violation of the 14th Amendment—for state courts or federal courts to be involved in the enforcement of racially restrictive covenants. As a result of the decision, those covenants became legally unenforceable. Today, although discriminatory restrictive covenants still appear in some older documents, it is a violation of both federal and state laws to attempt to enforce or comply with them. If such a restriction is included in a new deed, the restriction is unenforceable, but it does not affect the conveyance. (Rockwell, 434-446)

**Real Estate Math**

*Real estate agents use math constantly: to calculate their commissions, to determine the square footage of homes they are listing or selling, to prorate closing costs, and so on. Electronic calculators make all of these tasks much easier than they once were, but it is still necessary to have a basic grasp of the math involved. This chapter provides step-by-step instructions for solving a wide variety of real estate math problems.*

**Solving Math Problems**

We’re going to begin our discussion of real estate math with a simple approach to solving math problems. Master this four-step process, and you’ll be able to solve most math problems you are likely to encounter.
1. **Read the question**
   The most important step is to thoroughly read and understand the question. You must know what you are looking for before you can successfully solve any math problem. Once you know what you want to find out (for example, the area, the commission amount, or the total profit), you'll be able to decide which formula to use.

2. **Write down the formula**
   Write down the correct formula for the problem you need to solve. For example, the area formula is $Area = Length \times Width$, which is abbreviated $A = L \times W$. Formulas for each type of problem are presented throughout this chapter, and there is a complete list at the end of the chapter.

3. **Substitute**
   Substitute the relevant numbers from the problem into the formula. Sometimes there are numbers in the problem that you will not use. It's not unusual for a math problem to contain unnecessary information, which is why it is very important to read the question first and determine what you are looking for. The formula will help you distinguish between the relevant and irrelevant information given in the problem.

   In some problems you will be able to substitute numbers into the formula without any additional steps, but in other problems one or more preliminary steps will be necessary. For instance, you may have to convert fractions to decimals.

4. **Calculate**
   Once you have substituted the numbers into the formula, you are ready to perform the calculations to find the unknown—the component of the formula that was not given in the problem. Most of the formulas have the same basic form: $A = L \times W$. The problem will give you two of the three numbers (or information to enable you to find two of the numbers) and then you will either have to divide or multiply to find the third number, which is the solution to the problem.
Whether you'll multiply or divide is determined by which component in the formula is the unknown. For example, the formula \( A = L \times W \) may be converted into two other formulas. All three formulas are equivalent, but they are put into different forms depending on the element to be discovered.

- If the quantity \( A \) (the area) is unknown, then the following formula is used: \( A = L \times W \). The number \( L \) is **multiplied** by \( W \). The product of \( L \) multiplied by \( W \) is \( A \).
- If the quantity \( L \) (the length) is unknown, the following formula is used: \( L = A \div W \). The number \( A \) is **divided** by \( W \). The quotient of \( A \) divided by \( W \) is \( L \).
- If the quantity \( W \) (the width) is unknown, the following formula is used: \( W = A \div L \). The number \( A \) is **divided** by \( L \). The quotient of \( A \) divided by \( L \) is \( W \).

Thus, the formula \( A = L \times W \) may be used three different ways depending on which quantity is unknown. For the examples below, assume the area of a rectangle is 800 square feet, the length is 40 feet, and the width is 20 feet.

\[
\begin{align*}
A &= L \times W \\
L &= A \div W \\
W &= A \div L \\
A &= 40' \times 20' \\
L &= \frac{800 \text{ Sq. ft}}{20'} \\
W &= \frac{800 \text{ Sq. ft}}{40'} \\
40' \times 20' &= 800 \text{ Sq. ft} \\
800 \text{ Sq. ft} \div 20' &= 40' \\
800 \text{ Sq. ft} \div 40' &= 20'
\end{align*}
\]

After you've substituted the numbers given in the problem into the formula, you might have trouble deciding whether you're supposed to multiply or divide. It may help to compare your equation to the very familiar calculation \( 2 \times 3 = 6 \). If the unknown component of your equation is in the same position as the 6 in \( 2 \times 3 = 6 \), then you need to multiply the two given numbers to find the unknown.

If the unknown component is in the 2 position or the 3 position, you need to divide. You'll divide the given number in the 6 position by the other given number to find the unknown.

\[
\begin{align*}
? \times 3 &= 6 & \text{becomes} & 6 \div 3 &= 2 \\
2 \times ? &= 6 & \text{becomes} & 6 \div 2 &= 3
\end{align*}
\]
Now let's apply the four-step approach to an example. Suppose a room is 10 feet wide and 15 feet long. How many square feet does it contain?

1. **Read the question.** This problem asks you to find the square footage or area of a rectangular room. So you'll need the area formula for a rectangle.

2. **Write down the formula.** \( \text{Area} = \text{Length} \times \text{Width} \)

3. **Substitute.** Substitute the numbers given in the problem into the formula. The length of the rectangle measures 15 feet, and the width measures 10 feet: \( A = 15' \times 10' \).

4. **Calculate.** Multiply Length times Width to get the answer: \( 15' \times 10' = 150 \text{ Sq. ft.} \) Thus, \( A = 150 \). The area of the room is 150 square feet.

Suppose the problem gave you different pieces of information about the same room: the area is 150 square feet and it's 10 feet wide. How long is the room? Again, follow the four-step approach.

1. **Read the question.** You're asked to find the length or width of a rectangle. You'll need the area formula again.

2. **Write down the formula.** \( \text{Area} = \text{Length} \times \text{Width} \)

3. **Substitute.** Substitute the numbers given in the problem into the formula: \( 150 = L \times 10' \).

4. **Calculate.** The length of the rectangle is the unknown. Thus, the basic area formula is converted into a division problem to find the length: \( 150 \text{ Sq. ft.} \div 10' = 15' \). The result of 150 divided by 10 is 15. The length of the rectangle, or of the room, is therefore 15 feet.
Decimal Numbers

To carry out a calculation, it’s easier to work with decimal numbers than with fractions or percentages. So if a problem presents you with fractions or percentages, you’ll usually convert them into decimal numbers.

Converting Fractions. To convert a fraction into decimal form, divide the top number of the fraction (the numerator) by the bottom number of the fraction (the denominator).

Example: To change 3/4 into a decimal, divide 3 (the top number) by 4 (the bottom number): \(3 ÷ 4 = .75\).

Example: To convert 2/3 into a decimal, divide 2 (the top number) by 3 (the bottom number): \(2 ÷ 3 = .66667\).

If you don’t already know them, it’s useful to memorize the decimal equivalents of the most common fractions:

\[
\begin{align*}
\frac{1}{4} & = .25 \\
\frac{1}{2} & = .5 \\
\frac{3}{4} & = .75
\end{align*}
\]

Converting Percentages. To solve a problem involving a percentage, you’ll first convert the percentage into a decimal number, then convert the decimal answer back into percentage form.

To convert a percentage to a decimal, remove the percent sign and move the decimal point two places to the left. It may be necessary to add a zero.

Example:

\[
\begin{align*}
98\% & \text{ becomes } .98 \\
5\% & \text{ becomes } .05 \\
32.5\% & \text{ becomes } .325 \\
17.5\% & \text{ becomes } .175
\end{align*}
\]
To convert a decimal into a percentage, do just the opposite. Move the decimal point two places to the right and add a percent sign.

Example:

\[ .15 \text{ becomes } 15\% \]
\[ .08 \text{ becomes } 08\% \]
\[ .095 \text{ becomes } 09.5\% \]

The percent key on a calculator performs the conversion of a percentage to a decimal number automatically. On most calculators, you can key in the digits and press the percent key, and the calculator will display the percentage in decimal form.

**Decimal Calculations.** Calculators handle decimal numbers in exactly the same way as whole numbers. If you enter a decimal number into the calculator with the decimal point in the correct place, the calculator will do the rest. But if you’re working without a calculator, you’ll need to apply the following rules.

To add or subtract decimals, put the numbers in a column with their decimal points lined up.

Example: To add 3.75, 14.62, 1.245, 679, 1,412.8, and 1.9, put the numbers in a column with the decimal points lined up as shown below, then add them together.

\[
\begin{array}{c}
3.75 \\
14.62 \\
1.245 \\
679.0 \\
1,412.8 \\
+ 1.9 \\
\hline \\
2,113.315 \\
\end{array}
\]

To multiply decimal numbers, first do the multiplication without worrying about the decimal points. Then put a decimal point into the answer in the correct place. The answer should have as many decimal places (that is, numbers to the right of its decimal point) as the total number of decimal
places in the numbers that were multiplied. So count the decimal places in
the numbers you are multiplying and put the decimal point the same number
of places to the left in the answer.

**Example:** Multiply 24.6 times 16.7. The two numbers contain a
total of two decimal places.

\[
\begin{array}{c}
24.6 \\
x 16.7 \\
\hline
410.82
\end{array}
\]

In some cases, it will be necessary to include one or more zeros
in the answer to have the correct number of decimal places.

**Example:** Multiply .2 times .4. There is a total of two
decimal places.

\[
\begin{array}{c}
.2 \\
x .4 \\
\hline
.08
\end{array}
\]

A zero has to be included in the answer in order to move the
decimal point two places left.

To divide by a decimal number, move the decimal point in the
denominator (the number you’re dividing the other number by) all the way to
the right. Then move the decimal point in the numerator (the number that
you’re dividing) the same number of places to the right. (In some cases it
will be necessary to add one or more zeros to the numerator in order to
move the decimal point the correct number of places.)

**Example:** Divide 26.145 by 1.5. First move the decimal point in 1.5
all the way to the right (in this case, that’s only one place). Then
move the decimal point in 26.145 the same number of places to the right.

\[
26.145 \div 1.5 \text{ becomes } 261.45 \div 15
\]

Now divide. 261.45 \div 15 = 17.43
Remember, these steps are unnecessary if you’re using a calculator. If the numbers are keyed in correctly, the calculator will automatically give you an answer with the decimal point in the correct place.

**Area Problems**

A real estate agent often needs to calculate the area of a lot, a building, or a room. Area is usually stated in square feet or square yards. The formula to be used for the calculation depends on the shape of the area in question. It may be a square, a rectangle, a triangle, or some combination of those shapes.

**Squares and Rectangles**

As stated earlier, the formula for finding the area of a square or a rectangle is \( A = L \times W \).

**Example:** If a rectangular room measures 15 feet along one wall and 12 feet along the adjoining wall, how many square feet of carpet would be required to cover the floor?

1. **Read the question.** You’re being asked to find the area (the square footage) of a rectangle.

2. **Write down the formula.** \( A = L \times W \)

3. **Substitute.** \( A = 15' \times 12' \)

4. **Calculate.** Since the quantity \( A \) is unknown, multiply \( L \) times \( W \) for the answer: \( 15' \times 12' = 180 \text{ Sq. ft.} \) 180 square feet of carpet are needed to cover the floor.
Now take the problem one step further. If carpet is on sale for $12 per square yard, how much would it cost to carpet the room?

1. **Read the question.** You’re first being asked to determine how many square feet there are in a square yard, and then to determine how many square yards there are in 180 square feet. A square yard is a square that measures one yard on each side. There are three feet in a yard.

2. **Write down the formula.** \( A = L \times W \)

3. **Substitute.** \( A = 3' \times 3' \)

4. **Calculate.** Since the quantity \( A \) is the unknown, multiply \( L \) times \( W \):
\[
3' \times 3' = 9 \text{ Sq. ft.}
\]

So there are 9 square feet in a square yard. Now divide 180 by 9 to see how many square yards there are in 180 square feet:
\[
180 \div 9' = 20 \text{ Sq. yd.}
\]

Now multiply the number of square yards (20) by the cost per square yard ($12): \( 20 \times $12 = $240 \) **Cost to carpet room.**

**Triangles**

The formula for finding the area of a triangle is:

\[
\text{Area} = \frac{1}{2} \times \text{Base} \times \text{Height}
\]
Example: If commercial building lots in a certain neighborhood are selling for approximately $5 per square foot, approximately how much should the lot pictured below sell for?

1. Write down the formula. \( A = \frac{1}{2} B \times H \)

2. Substitute. Area = 55' \((\frac{1}{2} \text{ of } 110) \times 75'\)

3. Calculate. \(75' \times 55' = 4,125 \text{ Sq. ft.}\)

The order of multiplication doesn’t matter. You can multiply 110 times 75 and then divide it in half. Or you can divide 110 by 2 and then multiply the result by 75. Or you can divide 75 by 2 and then multiply the result by 110. Whichever way you do it, the answer will be the same.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) 110 \times 75 = 8,250</td>
<td>8,250 \div 2 = 4,125</td>
<td>4,125 Sq. ft.</td>
</tr>
<tr>
<td>b) 110 \div 2 = 55</td>
<td>55 \times 75 = 4,125</td>
<td>4,125 Sq. ft.</td>
</tr>
<tr>
<td>c) 75 \div 2 = 37.75</td>
<td>37.5 \times 110 = 4,125</td>
<td>4,125 Sq. ft.</td>
</tr>
</tbody>
</table>
The lot contains 4,125 square feet. If similar lots are selling for about $5 per square foot, this lot should sell for about $20,625.

\[
\begin{align*}
4,125 \text{ Square feet} & \times \quad $5 \text{ Per square foot} \\
\hline
$20,625 \text{ Selling price}
\end{align*}
\]

**Odd Shapes**

The best approach to finding the area of an odd-shaped figure is to divide it up into squares, rectangles, and triangles. Find the areas of those figures and add them all up to arrive at the area of the odd-shaped lot, room, or building in question.

**Example:** If the lot pictured below is leased on a 50-year lease for $3 per square foot per year, with rental payments made monthly, how much would the monthly rent be?

First, divide the lot up into rectangles and triangles.
The next step is to find the area of each of the following figures. The height of the triangle is determined by adding together the 70-foot border of the small rectangle and the 40-foot border of the large rectangle, as shown above.

First, find the area of the triangle.

1. Write down the formula: \( A = \frac{1}{2} \text{ Base} \times \text{Height} \)

2. Substitute: \( A = 32.5' \left( \frac{1}{2} \text{ of } 65' \right) \times 110' \)

3. Calculate: \( 32.5' \times 110' = 3,575 \text{ Sq. ft.} \)

Then, find the area of the large rectangle.

1. Write down the formula: \( A = \text{Length} \times \text{Width} \)

2. Substitute: \( A = 110' \times 60' \)

3. Calculate: \( 110' \times 60' = 6,600 \text{ Sq. ft.} \)

Next, find the area of the small rectangle.

1. Write down the formula: \( A = \text{Length} \times \text{Width} \)

2. Substitute: \( A = 70' \times 50' \)

3. Calculate: \( 50' \times 70' = 3,500 \text{ Sq. ft.} \)

Finally, add the three areas together to find the area of the entire lot: \( 3,575 + 6,600 + 3,500 = 13,675 \text{ Total square feet.} \)

The lot contains 13,675 square feet. At $3 per square foot per year, the annual rent would be $41,025.

\[
\begin{align*}
13,675 \text{ Square feet} \\
\times \quad \$3 \text{ Rent per square foot} \\
\hline
\$41,025 \text{ Annual rent}
\end{align*}
\]
The monthly rental payment would be one-twelfth of the annual rent: $41,025 ÷ 12 = $3,418.75. Thus, the monthly rental payment for this odd-shaped lot is $3,418.75.

**Volume Problems**

Occasionally you may need to calculate the volume of a three-dimensional space. Volume is usually stated in cubic feet or cubic yards. A formula for calculating volume can be stated as:

\[
Volume = \text{Length} \times \text{Width} \times \text{Height}, \text{ or } V = L \times W \times H.
\]

It’s the same as the area formula, except it has one added element: \( H \), the height of the space being measured.

**Example:** The floor of a storage unit measures 13 feet 6 inches by 20 feet, and it has a 12-foot ceiling. What is the volume of the unit in cubic yards?

1. **Write down the formula.** \( V = L \times W \times H \)

2. **Substitute.** \( V = 20' \times 13.5' \times 12' \)

3. **Calculate.**

   \[
   \begin{align*}
   \text{Step 1} & \quad 20' \\
   \times 13.5' & \quad \frac{270 \text{ Square feet}}{} \\
   \end{align*}
   \]

   \[
   \begin{align*}
   \text{Step 2} & \quad 270 \text{ Square feet} \\
   \times 12' & \quad \frac{3,240 \text{ Cubic feet}}{} \\
   & \quad \frac{3,240 \text{ Cubic feet}}{}
   \end{align*}
   \]

4. **Now convert the cubic feet into cubic yards.** As you saw earlier, a square yard measures 3 feet by 3 feet, or 9 square feet. A cubic yard measures 3 feet by 3 feet by 3 feet, or 27 cubic feet. Divide the volume of the storage area in cubic feet by 27 to find the volume in cubic yards: \( 3,240 \div 27 = 120 \text{ Cubic yards} \). The volume of the storage space is 120 cubic yards.
Percentage Problems

Many real estate math problems involve percentages. This includes problems about brokerage commissions, interest on mortgage loans, property appreciation or depreciation, and capitalization.

Solving Percentage Problems

To solve percentage problems, you'll usually convert the percentage into a decimal number, calculate, and then convert the answer back into percentage form. As explained earlier, a percentage is converted into a decimal number by removing the percent sign and moving the decimal point two places to the left. If the percentage is a single digit (for example, 7%), it will be necessary to add a zero (.07). To convert a decimal number into a percentage, you reverse those steps: move the decimal point two places to the right and add the percent sign.

In a math problem, whenever something is expressed as a percentage “of” another number, that indicates that you should multiply that other number by the percentage.

For instance, what is 75% of $40,000?

\[
\text{Step 1} \quad 75\% \text{ becomes } .75 \\
\text{Step 2} \quad \frac{40,000}{.75} = \frac{30,000}{}
\]

Basically, percentage problems ask you to find a part of a whole. The whole is a larger figure, such as a property's sales price. The part is a smaller figure, such as a broker's commission. The general formula might be stated thus: A percentage of the whole equals the part. This can be written as an equation: Part = Whole \times Percentage.
Example: A house is listed for sale at a price of $172,000, with an agreement to pay the broker a commission of 6% of the sales price. The property sells for $170,000. How much is the commission?

1. Write down the formula. \( P = W \times \% \)
2. Substitute. Change the percentage (6%) into a decimal number (.06) first: \( P = 170,000 \times .06 \).
3. Calculate.

\[
\begin{align*}
\text{Sales price} & \quad x \quad \text{Commission rate} \\
$170,000 & \quad \times \quad .06 \\
\hline
$10,200 & \quad \text{Commission}
\end{align*}
\]

The broker's commission is $10,200.

In some percentage problems, the part is given and you're asked to calculate either the whole or the percentage. For those problems, you'll need to rearrange the percentage formula into a division problem. If the whole is the unknown, divide the part by the percentage: \( \text{Whole} = \text{Part} \div \text{Percentage} \).

If the percentage is the unknown, divide the part by the whole: \( \text{Percentage} = \text{Part} \div \text{Whole} \).

Notice that in either case, you'll be dividing the value of the part by either the whole (to determine the percentage) or by the percentage (to determine the whole).

**Commission Problems**

Like the example above, most commission problems can be solved with the general percentage formula: \( P = W \times \% \).

The percentage is the commission rate, and the whole is the amount that the commission is based on. In most problems, this will be the sales price of a piece of property. The part is the amount of the commission.
Example: A listing agreement provides for a commission of 7% of the sales price to be paid to the broker. The broker has agreed to pay his salesperson 60% of the commission. How much will the salesperson receive if the property sells for $145,000?

1. Write down the formula. \( P = W \times \% \)

2. Substitute. Change the percentage (7%) to a decimal number (.07): \( P = 145,000 \times .07 \).

3. Calculate. The part is the unknown quantity, so the percentage is multiplied by the whole.

\[
\begin{array}{c}
\$145,000 \text{ Sales price} \\
\times \quad .07 \text{ Commission rate} \\
\hline \\
\$10,150 \text{ Total commission}
\end{array}
\]

The total commission is $10,150. The salesperson is entitled to 60% of the total commission. Apply the percentage formula again to determine the amount of the salesperson’s share.

1. Write down the formula. \( P = W \times \% \)

2. Substitute. Convert the percentage (60%) to a decimal number (.60): \( P = 10,150 \times .60 \).

3. Calculate.

\[
\begin{array}{c}
\$10,150 \text{ Total commission} \\
\times \quad .60 \text{ Salesperson’s percentage} \\
\hline \\
\$6,090 \text{ Salesperson’s share}
\end{array}
\]

The following example illustrates another form that commission problems can take.

Example: A listing agreement provided for a two-tiered commission based on the property’s sales price. The commission would be 7%
of the first $100,000 and 5% of any amount over $100,000. If the commission was $8,250, what was the sales price?

1. **Read the question.** You’re given the commission rates and the amount of the commission, and then asked to find the sales price. Your first step in the process is to find out how much of the commission amount is attributable to the first $100,000 of the sales price.

2. **Write down the formula.** \( P = W \times \% \)

3. **Substitute**, converting the percentage to a decimal:

\[
P = $100,000 \times .07.
\]

4. **Calculate.**

\[
$100,000 \times .07 = $7,000
\]

So $7,000 of the commission is based on the first $100,000 of the sales price. Next, subtract to find the amount of the rest of the commission.

\[
\begin{align*}
8,250 & \quad \text{Total commission} \\
- 7,000 & \quad \text{Commission from first $100,000} \\
\hline
1,250 & \quad \text{Salesperson’s share}
\end{align*}
\]

Now you know that out of the total commission, $1,250 is attributable to the part of the sales price in excess of $100,000. You can use that figure along with the second tier commission rate (5% of the amount over 100,000) to determine by how much the sales price exceeded $100,000.

1. **Write down the formula.** \( P = W \times \% \)

2. **Substitute**, converting the percentage to a decimal:

\[
$1,250 = W \times .05.
\]
3. **Calculate.** The quantity \( W \) (the whole) is the unknown. To isolate the unknown, the basic formula must be turned into a division problem. The part divided by the percentage equals the whole: 
\[
1,250 \div 0.05 = 25,000.
\]

This shows that the portion of the sales price in excess of $100,000 amounted to $25,000. Thus, the total sales price is $100,000 plus $25,000, or $125,000. (Rockwell, 518-529)

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**Cited Material:**